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**INDIANAPOLIS FIRE DEPARTMENT
BID FOR FIRE HOSE, FITTINGS & COUPLINGS
ITB-0007216
March 31, 2009, 10:00 am**

6975 Hillside Court, Indianapolis, IN 46250

Jim Hardie, Representative

PH: 888-322-8402

FAX: 317-596-1701

www.mesfire.com

RFB: ITB0007216

Page: 1

Due Date: 03/31/2009 Time: 10:00 AM

Purchasing Agent: SHERRY OWENS -SLONGERI@INDYGOV.ORG

Mail To:

PURCHASING DIVISION

200 E WASHINGTON ST SUITE 1522

INDIANAPOLIS, IN 46204 3313

For questions regarding specifications contact:

SHERRY OWENS

317 327 3577

TWO (2) YEAR TERM QUOTE FOR FIRE HOSE, FITTINGS & COUPLINGS FOR IFD

ALL IN ACCORDANCE WITH ATTACHED SPECIFICATIONS. BIDDER SHALL EXPLAIN AND DESCRIBE ANY AND ALL EXCEPTIONS TO THE SPECIFICATIONS AND SUBMIT WITH THE BID. BIDDER SHALL ALSO RETURN PAGES 17 THROUGH 19

THIS ITB FORM MUST BE SIGNED AND RETURNED IN A SEALED WRITTEN ENVELOPE NO LATER THAN 03/31/09 BY 10:00 AM, TO THE ABOVE REFERENCED ADDRESS

FAILURE TO SUBMIT THE FOLLOWING WILL RENDER YOUR QUOTE NON-RESPONSIVE:

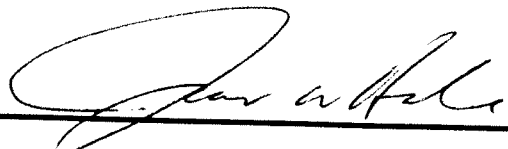
1. THIS BID FORMSIGNED
2. AFFIDAVIT OF NON COLLUSION . . . SIGNED AND NOTARIZED

FAILURE TO PROVIDE THE MBE/WBE PARTICIPATION PLAN OR APPLICATION FOR WAIVER (PAGES 15 OR 16) AT THE TIME OF SUBMISSION MAY RESULT IN A NON-RESPONSIVE BID.

ALL QUESTIONS MUST BE IN WRITTEN FORM ONLY AND RECEIVED NO LATER THAN 03/24/09 BY 12 NOON BY FAX TO (317) 327-4493, ATTENTION: SHERRY OWENS, OR BY E-MAIL TO SLONGERI@INDYGOV.ORG

ITEMS ARE TO BE SHIPPED TO: INDIANAPOLIS FIRE DEPT FLEET SERVICES
2700 SOUTH BELMONT AV
INDIANAPOLIS, IN. 46221

LATE QUOTES WILL NOT BE ACCEPTED FOR ANY REASON.

 3-26-09

Line	Quantity	Unit	Unit Cost	Total Cost
001	10,000.00	FT	\$ 4.08	\$ 40,800

RFB: ITB0007216

Page: 2

Due Date: 03/31/2009

Time: 10:00 AM

Purchasing Agent: SHERRY OWENS -SLOINGERI@INDYGOV.ORG

Line	Quantity	Unit	Unit Cost	Total Cost
3" FIREQUIP HYDRO FLOW HOSE OR CITY APPROVAL EQUAL . IF BIDDING OTHER THAN FIREQUIP, PLEASE SPECIFY: _____				
002	10,000.00	FT	\$ 2.06	\$ 20,600
1-3/4" FIREQUIP 800 OR CITY APPROVED . IF BIDDING OTHER THAN FIREQUIP, PLEASE SPECIFY: _____				
003	3,000.00	FT	\$ 5.48	\$ 16,440
5" FIREQUIP HYDRO FLOW HOSE OR CITY APPROVED EQUAL . IF BIDDING OTHER THAN FIREQUIP, PLEASE SPECIFY: _____				
004	3,000.00	FT	\$ 2.98	\$ 8,940
2 1/2" FIREQUIP 800 OR CITY APPROVAL EQUAL . IF BIDDING OTHER THAN FIREQUIP, PLEASE SPECIFY: _____				
				Grand Total: \$ 86,780

"U.S. MANUFACTURED PRODUCT PREFERENCE CERTIFICATION"

THIS IS TO CERTIFY UNDER PENALTIES OF PERJURY THAT EACH OF THE BIDDER'S AND PRODUCTS, EXCEPT THOSE LISTED BELOW, ARE A U.S. MANUFACTURED PRODUCT AS STATED IN IC 5-22-15-21. A PRODUCT IS MANUFACTURED IN THE UNITED STATES, IF THE COST OF ITS COMPONENTS MINED, PRODUCED, OR MANUFACTURED IN THE UNITED STATES EXCEEDS FIFTY (50%) OF THE COST OF ALL ITS COMPONENTS. (IN DETERMINING IF A PRODUCT IS MANUFACTURED IN THE UNITED STATES, ONLY THE PRODUCT AND ITS COMPONENTS SHALL BE CONSIDERED.)

***** PLEASE CHECK ONE OF THE FOLLOWING *****

(✓) U.S. MANUFACTURED PRODUCT PREFERENCE APPLIES

RFB: ITB0007216

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Due Date: 03/31/2009 Time: 10:00 AM

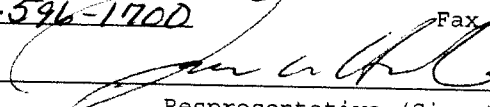
Purchasing Agent: SHERRY OWENS -SLONGER@INDYGOV.ORG

() U.S. MANUFACTURED PRODUCT PREFERENCE "DOES NOT" APPLY TO THE
FOLLOWING PRODUCT(S)

PRODUCT (S)

COUNTRY OF ORIGIN

THE UNDERSIGNED AGREES TO FURNISH THE GOODS AND/OR PERFORM THE SERVICE
(PUBLIC WORK CONSTRUCTION INCLUDED) SET FORTH IN THIS BID/QUOTE
DOCUMENT. THE UNDERSIGNED ALSO CONVEYS THAT HE/SHE IS FULLY
EMPOWERED TO EXECUTE AND DELIVER THIS BID/QUOTE ON BEHALF OF THE
BIDDER AND THAT, IF ACCEPTED BY THE CITY/COUNTY, THIS BID/QUOTE
SHALL REPRESENT A LAWFUL AND BINDING OBLIGATION OF THE BIDDER.

Firm Name MES, Inc Prices Firm Through 12-31-2011
Address 6975 Hillsdale Ct Payment Terms Net 30
City, State, Zip Indianapolis, IN Delivery Date ARO 4-6 wks
Phone # 317-596-1700 ⁴⁶²⁵⁰ Fax # 317-596-1701
BY 
Representative (Signature)
JAMES W. HARDIE
Typewritten Name of Representative



1605 Prospect Street
Indianapolis, IN 46203
888-322-8402 toll free
317-822-8542 fax

QUOTE #: 06-100

TO:	Indianapolis Fire Dept	FOB	Shipping point	Date:	3/31/09
		Terms	Net 30 Days	Fax:	317-596-1700
				Delivery:	
ATTN:	Purchasing Dept.	By:	Jim Hardie	Quote #:	ITB0007216

QUOTATION: Freight Free

[illegible]

AFFIDAVIT OF NON-COLLUSION

THE UNDERSIGNED, HAVING BID FOR MES, INC
accordance with notice given by the Purchasing Division and the City of Indianapolis and/or Marion
County for such supplies, merchandise, service or contract for and in behalf of himself, or themselves,
being first duly sworn says:

That said bidder has not directly or indirectly entered into any combination, collusion, undertaking or
agreement relative to the price to be bid by any person, or to prevent any bidder, or bidders, from bidding, or
to induce any bidder, or bidders, to refrain from bidding for such supplies, merchandise, service or contract,
and that said bid so made is without reference or regard to any other bid, or bids, and without agreement,
understanding or combination, either directly or indirectly, with any person or persons, with reference to such
bidding in any way or manner whatsoever.

STATE OF

Indiana

Signed

COUNTY OF

Marion

SS:

Subscribed and sworn to before me this 26th day of March, 20 09

My commission expires

5/20/16

Patty R. Lantz

Notary public

(Seal)

Dated at

Indianapolis

City

IN
State

3-26-09
Date

FAILURE TO PROPERLY NOTARIZE AND RETURN THIS FORM WILL INVALIDATE YOUR BID

**City of Indianapolis
Invitation to Quote
On Fire Hoses, Fittings and Couplings For
The Indianapolis Fire Department**

The following terms will be included in the resulting agreement between the successful vendor and the City of Indianapolis (City). Please read carefully. **Questions pertaining to the technical specifications and quoting documents may be directed to Ms. Sherry Owens, Purchasing Division, in writing either by e-mail to slonger@indy.gov or fax (317) 327-4493, no later than one (1) week prior to due date.**

1.0 General

Vendors are invited to quote unit prices for Fire Hoses, Fittings and Couplings to be furnished and delivered to The Indianapolis Fire Department, Fleet Services, 2700 South Belmont Avenue, Indianapolis IN., in Marion County, IN. Other departments and agencies may also utilize this contract.

PLEASE NOTE: Any related addenda to this quote, including written answers to questions, will be posted on the Purchasing Division's official website at www.indy.gov/purch under the appropriate project heading. Addenda will NOT be sent directly to vendors. Vendors will be responsible for periodically checking this website for any related addenda up to and including the due date. Vendors should print out, sign and return written acknowledgement(s) with their quote.

2.0 Term Contract

This Invitation to Quote is to establish one or more *term contracts* for these items. No guaranteed minimum or maximum purchase quantities are either stated or implied. Any quantities listed are estimates only based on past history or department survey, and the City may purchase substantially more or less than the amounts shown. All orders shall be on an "as needed" basis.

3.0 Split Awards

The City may award a contract to a vendor who submits the overall lowest, responsive and responsible quote; or, it may split the award between two or more vendors, all to the advantage of the City. For purposes of evaluation, a split between two or more vendors will not be considered to be to the advantage of the City if increased administrative costs offset any projected cost savings realized by splitting the award.

4.0 Contract Term

The term of the initial contract shall be **two (2) years**, effective from date of award letter.

5.0 Renewal

This contract may be renewed beyond the expiration date by mutual agreement of the parties. The term of the renewal may not be longer than the term of the original contract. A renewal shall be by written notice by either party and written acceptance by the other. All other terms and conditions of the contract shall remain the same as set forth herein, and may be amended only by written instrument signed by both the City and vendor and attached hereto as an amendment.

6.0 Firm Quotes

All quotes received shall be considered valid for not less than ninety (90) days from the date of quote opening. Pricing shall be firm for the length of the contract, including any renewals.

7.0 Literature

Please submit official manufacturer's literature regarding all items offered with the quote.

8.0 Bonds

There will be no *bid bonds* or *performance bonds* required for this contract.

9.0 Specifications

The specifications are intended to provide a foundation for open competition for the supply of commodities or services to meet City needs. Minor and immaterial technical deviations may, at the discretion of the City, be deemed in *substantial* compliance with the specifications. However, material variances may render the vendor *non-responsive* and ineligible for award. The use of brand names, models, etc. serves to establish the design, performance and level of quality needed and not to restrict competition. (Items that are equal in design, performance and quality will be considered.) The right to evaluate specification compliance and equality is reserved to the City, and the vendor shall have the burden of proof to demonstrate that any proposed substitutes are equal. Vendor shall note the manufacturer/model # of any substitutes, or the reference brand(s) will be assumed. All exceptions to the specifications and terms shall be noted in detail on the attached *Exception Sheet*.

10.0 Delivery

Unless otherwise agreed to by the requesting location, delivery shall be within fifteen (15) business days after receipt of a valid order. All deliveries shall be made Monday through Friday during normal business hours (official holidays excluded) unless other prior arrangements are made. Vendor shall adhere to any other delivery policies (e.g. notification, etc.) as may be required by the department or agency.

11.0 Freight Terms

The City requests "delivered pricing" (FOB Destination, Freight Prepaid & Allowed) for this particular contract, and shipping charges should therefore be included in the vendor's unit price. No other charges will be allowed. All items will be shipped and protected in transit per industry standards.

12.0 No Handling Charges

If, for any reason, the City rejects items supplied by the vendor, the City shall not be responsible for any shipping and handling, restocking, or similar charges incurred by the vendor.

13.0 Contract Termination

The City may terminate this contract for cause or convenience at any time during the term of the contract, without penalty, upon thirty (30) calendar days written notice to the vendor. The City shall be the sole judge of the adequacy of the vendor's performance pursuant to this contract.

14.0 Debarment and Suspension

Vendors should be aware that by entering into an agreement with the City, they, nor their principals, should be presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from entering into this agreement by any federal agency or by any department, agency or political subdivision of the State of Indiana. The term "principals", as used in this paragraph, means an officer, director, owner, partner, key employee, or other person with primary management or supervisory responsibilities, or a person who has critical influence on or substantive control over the operations of the vendor's business.

The awarded vendor shall **not** have their business name(s) or principal's name(s) listed on the debarment web site at <http://www.epis.gov/epis/search.do>. A check of this listing will be made by the City. The City of Indianapolis reserves the right to nullify the award of any quote, bid, or RFP based on this listing. It is recommended that vendors check the website listing prior to submitting documents.

15.0 Successors and Assigns

Vendor binds itself and its partners, successors, executors, administrators and assigns to City and to the partners, successors, executors, administrators and assigns of City, in respect to all covenants of this agreement; except as otherwise provided herein, vendor shall not assign, sublet or transfer its interest in this agreement without the written consent of City.

16.0 Samples

The vendor shall supply, at no cost to the City, samples of each hose material to be provided. These samples shall be a three foot section of each completed hose material. The vendor shall send the samples to the Indianapolis Fire Department, Fleet Services, 2700 South Belmont Avenue, Indianapolis IN 46221-2009 at least five days prior to the closing date for this quote. Samples shall be marked with the vendor name, address, contact information and quote number. Samples may be subject to testing and shall be retained by the City of Indianapolis, IFD to serve as an example of the type or quality of hose to be provided during the contract term.

17.0 Warranty for all Hose Supplied

The manufacturer shall unconditionally warranty the hose to be free from defects in materials and workmanship for a period of one (1) year. The warranty shall take effect on the receiving date of any new hose provided to IFD as the result of a purchase order. If the manufacturer warranty exceeds the one (1) year period, the City shall take full advantage. Vendor shall attach warranty coverage with the quote.

18.0 Changes in Hose Design or Formulation

During the term of the resulting agreement, the selected vendor shall notify the City of Indianapolis, IFD of any changes in the structure, composition or manufacturing process used in producing hose if these changes result in variance to the original hose sample provide and agreed upon. Subsequent changes in the hose shall be agreed upon in writing by the vendor and IFD through an amendment to the resulting agreement. A new sample of the revised hose shall provided to IFD prior to shipping any full lengths.

Technical Specifications

General: The following specifications are based on the Firequip® brand hose. The use of this brand name, models referenced, etc. serves to establish the design, performance and level of quality needed and not to restrict competition. (Items that are equal in design, performance and quality will be considered.) The right to evaluate specification compliance and equality is reserved to the City, and the vendor shall have the burden of proof to demonstrate that any proposed substitutes are equal. Vendor shall note the manufacturer/model # of any substitutes, or the reference brand(s) will be assumed. All exceptions to the specifications and terms shall be noted in detail on the attached *Exception Sheet*.

Note: Some specification descriptions will carry over to the next page.

Item	Description	Annual Requirement
1.	<p>5" Firequip® Hydro Flow Hose or City Approved Equal Nitrile Rubber, Light Weight, Attack Hose</p> <p>1 Hose Construction</p> <ul style="list-style-type: none"> a. Hose shall consist of a 100% synthetic high tensile yarn reinforcement circular woven in a "Twill Configuration" to maximize hose flexibility and eliminate any left hand twist. b. The woven reinforcement shall be totally encased in a matrix of ozone resistant nitrile rubber utilizing a single, "through the weave extrusion process" thereby eliminating the possibility of delamination. c. The unitized finished product shall optimize hydrostatic properties, abrasion resistance and rubber to yarn adhesion. <p>2 Lining and Cover Properties</p> <p>When tested in accordance with the procedures listed in NFPA 1961 (Latest Edition) and other related standards, liner and cover shall have the following properties:</p> <ul style="list-style-type: none"> a. Ultimate Tensile Strength: Tensile strength of lining and cover rubber compound shall not be less than 1600 psi. b. Ultimate Elongation: Ultimate elongation of the liner and cover shall not less than 400% c. Permanent Elongation: Permanent elongation of the liner shall not be greater than 25% d. Accelerated Aging Test: When conditions are as listed in ASTM D1349-99, samples of the vulcanized rubber compound subjected to air oven aging at 100°C. for 70 +/- ½ hour and then tested in accordance with ASTM573-04 will exhibit a tensile strength of not less than 80% of the un-aged sample. The ultimate elongation shall be not less than 50% of the original value. e. Adhesion: Adhesion between reinforcement and either cover or liner shall be a minimum of 15 lbs. when tested using ASTM D380-99 procedure. f. Ozone Resistance: Hose shall show no visible signs of cracking of the lining or cover when tested in accordance with ASTM D1149-99 and ASTM D518-99, procedure B, 100 pphm/118 degrees F/70 hours. Hose shall meet NFPA requirements for "ozone resistant" hose, and have approval to be labeled as ozone resistant. g. Chalking: Hose furnished to this specification shall not react by adversely to environmental changes (chalking caused by exposure to sunlight). h. Chemical Resistance: Exposure to sea water and contamination by most chemical substances, hydrocarbons, oils, alkalis, acids and grease must have no effect on the short or long term performance of the hose. Manufacturer shall provide standard chemical resistance charts. 	6,000 Feet

3 Safety Factors

- a. U.L. Reciprocating Test: Hose shall withstand 5,000 cycles on a reciprocating abrasion tester as specified in UL Standard 19- resulting in no delamination or damage to the reinforcing yarns. Hose so abraded shall still comply with NFPA 1961
- b. Tabor Exposure Test: Hose shall withstand 10,000 cycles on the Taber abrasion machine H22 wheels, 1,000 gm total load per wheel, 2,000 gm total, without exposure of the synthetic reinforcement fibers. Tests to be performed in accordance with ASTM D3389-94. Wheels must be re-faced immediately prior to commencement of test.
- c. Tabor Damage Test: Hose shall withstand 24,000 cycles on the Taber abrasion machine H22 wheels, 1,000 gm total load per wheel, 2,000 gm total, without damage to the synthetic reinforcement fibers. Tests to be performed in accordance with ASTM D3389-94. Wheels must be re-faced immediately prior to commencement of test.
- d. Cold Resistance: Hose shall have the capability of safe use to temperatures down to -35°F. Hose shall have no apparent damage to cover reinforcement or lining when subjected to the following cold bending test: A 50 foot length of dry hose is to be firmly coiled and placed in a cold box at -35°F. for a duration of 24 hours. Immediately after removal of the hose from the box, the hose shall be uncoiled and laid out by one operator. Following this procedure, the hose shall not leak or show any damage to the reinforcement when subjected to a hydrostatic acceptance pressure test as in specification section 4 herein.
- e. Heat Resistance: The hose, when subject to a static pressure of 100 psi shall be capable of safely withstanding a surface temperature of 1200°F for a minimum of two minutes without bursting.
- f. Performance testing shall be certified by an independent third party in accordance with OSHA regulations as set forth in Federal Code 29CFR, Section 1910.7, Appendix A, "OSHA Recognition Process for Nationally Recognized Testing Laboratories".

4 Performance Characteristics

The hose shall comply with the National Fire Protection Association Standard: NFPA 1961 (Latest Edition)

Hose Diameter	Service Pressure (psi)	Acceptance Pressure (psi)	Kink Proof Pressure (psi)	Short Length Burst Pressure (psi)	Curved Length Burst Pressure (psi)
5 inch	200	400	400	600	600

5 Quality Assurance

Documentation: Manufacturer shall have a certified quality control program with documentation at each stage of production. Program shall meet the requirements of Mil I 45208. Underwriters Labs, Inc., and Factory Mutual Research, Inc.

6 Couplings

Coupling shall be manufactured in the United States of America. Entire coupling assembly shall be constructed of aluminum.

7 General

Couplings to be locking Storz quick connect with field repairable bindings. Bindings shall consist of a three-part collar securely held in place with three recessed bolts preloaded at the factory. Collar shall be designed to prevent damage to heads of bolts when hose is being deployed, used or loaded. Locks must automatically lock when engaged by coupling two couplings together or when engaging a locking half to any Storz appliance. Couplings must conform to North American standards. Coupling must be able to be assembled and disassembled using an Allen wrench only. Maximum overall connected length: 5" = 8 1/4".

8 Physical Requirements

Hose Diameter	Average Weight Coupled at 100 ft.	Coil Size Coupled at 100 ft.	Flat Width (inches)	Hose Per Cubic Foot
5 inch +/- 1/32	109 lbs.	27"	7-7/8"	34"

Color: High Visibility Yellow
Shipping Lengths: 100 feet
Couplings: Storz

2.

3" Firequip® Hydro Flow Hose or City Approved Equal Nitrile Rubber, Light Weight, Attack Hose

10,000 Feet

1 Hose Construction

- Hose shall consist of a 100% synthetic high tensile yarn reinforcements circular plain woven so as to eliminate any left hand twist.
- The woven reinforcement of the inner hose shall be totally encased in a matrix of ozone resistant nitrile rubber utilizing a single, "through the weave extrusion process" thereby eliminating the possibility of delamination.
- The unitized finished product shall optimize hydrostatic properties, abrasion resistance and rubber to yarn adhesion.

2 Lining and Cover Properties

When tested in accordance with the procedures listed in NFPA 1962-02 (Latest Edition) and other related standards, liner and cover shall have the following properties:

- Ultimate Tensile Strength: Tensile strength of lining and cover rubber compound shall not be less than 1750 psi.
- Ultimate Elongation: Ultimate elongation of the liner and cover shall not less than 500%
- Permanent Elongation: Permanent elongation of the liner shall not be greater than 25%
- Accelerated Aging Test: When conditions are as listed in ASTM D1349-87, samples of the vulcanized rubber compound subjected to air oven aging at 100°C. for 70 +/- 1/2 hour and then tested in accordance with ASTM 573-88 will exhibit a tensile strength of not less than 80% of the un-aged sample. The ultimate elongation shall be not less than 50% of the original value.
- Adhesion: Adhesion between reinforcement and either cover or liner shall be a minimum of 22 1/2 lbs. when tested using NFPA 1961-02 procedure.
- Ozone Resistance: Hose shall show no visible signs of cracking of the lining or cover when tested in accordance with ASTM D1149-91 and ASTM D518-86, Procedure B, 100 pphm/118 degrees F/70 hours.

- g. Chalking: Hose furnished to this specification shall not react by adversely to environmental changes (chalking caused by exposure to sunlight).
- a. Chemical Resistance: Exposure to sea water and contamination by most chemical substances, hydrocarbons, oils, alkalis, acids and grease must have no effect on the short or long term performance of the hose. Manufacturer shall provide standard chemical resistance charts.

3 Safety Factors

- a. U.L. Reciprocating Test: Hose shall withstand 7,000 cycles on a reciprocating abrasion tester as specified in UL Standard 219- resulting in no delamination or damage to the reinforcing yarns. Hose so abraded shall still comply with NFPA 1961/1962-02
- b. Tabor Exposure Test: Hose shall withstand 16,000 cycles on the Taber abrasion machine H22 wheels, 1,000 gm total load per wheel, 2,000 gm total, without exposure of the synthetic reinforcement fibers. Tests to be performed in accordance with ASTM D3389-85. Wheels must be re-faced immediately prior to commencement of test.
- c. Tabor Damage Test: Hose shall withstand 24,000 cycles on the Taber abrasion machine H22 wheels, 1,000 gm total load per wheel, 2,000 gm total, without damage to the synthetic reinforcement fibers. Tests to be performed in accordance with ASTM D3389-85. Wheels must be re-faced immediately prior to commencement of test.
- d. Cold Resistance: Hose shall have the capability of safe use to temperatures down to -36°F. Hose shall have no apparent damage to cover reinforcement or lining when subjected to the following cold bending test: A 50 foot length of dry hose is to be firmly coiled and placed in a cold box at -36°F. for a duration of 24 hours. Immediately after removal of the hose from the box, the hose shall be uncoiled and laid out by one operator. Following this procedure, the hose shall not leak or show any damage to the reinforcement when subjected to a hydrostatic acceptance pressure test as in specification section 4 herein.
- e. Heat Resistance: The hose, when subject to a static pressure of 100 psi shall be capable of safely withstanding a surface temperature of 1200°F for a minimum of two minutes without bursting.
- f. Performance testing shall be certified by an independent third party in accordance with OSHA regulations as set forth in Federal Code 29CFR, Section 1910.7, Appendix A, "OSHA Recognition Process for Nationally Recognized Testing Laboratories".

4 Performance Characteristics

Hydrostatic Test Pressures - The hose shall comply with the National Fire Protection Association Standard: NFPA 1961/1962-02 (Latest Edition)

Hose Diameter	Service Test (psi)	Acceptance Test (psi)	Kink Proof Pressure (psi)	Short Length Burst Pressure (psi)
3 inch	300	600	450	900

5 Quality Assurance

Documentation: Manufacturer shall have a certified quality control program with documentation at each stage of production. Program shall meet the requirements of Mil I 45208. Underwriters Labs, Inc., and Factory Mutual Research, Inc.

6 Friction Loss

The friction loss characteristic of the hose at 100 psi residual pressure shall ensure that the hose meets the values detailed below. (Actual Flow Testing)

Hose Diameter	50 gpm	100 gpm	150 gpm	200 gpm	250 gpm
3 inch	0.35 psi	0.53 psi	1.19 psi	2.1 psi	3.4 psi

Cover damage, punctures, and other small holes in the hose must be reparable with a vulcanizable patch or cold patch technique inside and out and thereby be restore the hose to full operational performance.

7 General

Couplings: Light weight extruded aluminum alloy, hard coat anodized, rocker lug. Threaded expansion ring couplings shall be manufactured in the USA.

8 Physical Requirements

Hose Diameter	Average Weight Uncoupled at 50 ft.	Coil Size Uncoupled at 50 ft.
3 inch	35 lbs.	18"

Color: High Visibility Yellow

Shipping Lengths: 50 feet

Couplings: Standard Male & Female Couplings, 2 1/2"

3.

2 1/2" Firequip 800 or City Approved Equal Premium Quality, Double Jacket, Municipal Fire Hose

6000 Feet

1. Hose must meet all requirements of NFPA 1961, Standard on Fire Hose Edition (1992 Edition)
2. Jackets:
 - a. Even, firm and well woven
 - b. Free from unsightly defects, dirt, knots, lumps and irregularities of twist
 - c. Seamless with polyester filler yarns woven around the hose throughout the length, with the wrap ends interwoven and covering the filler yarns.
 - d. Use of Nylon, Polyamide or Rayon yarns used in the warp or filler direction is not allowed. Use of any warp yarns of the filament or entangled construction is expressly forbidden.
 - e. Filler yarns of inner and outer jackets shall be high-tenacity filament polyester developed, designed and processed for fire hose jacket filler yarns.
 - f. Filler yarns shall be free from defects that are unsightly or may affect serviceability of the finished hose.
 - g. The staple polyester warp ends must completely cover and protect the filament polyester filler yarns.
3. Impregnation:

Each outside jacket shall be completely impregnated by a mechanical process to provide full coverage of an abrasion-resistant, water repellent, heat resistant compound prior to the jackets and inner liner being combined.
4. Wear Guard:

Hose to have an impregnated coating that resists heat and flame, eliminates water pickup, resists petrol-chemicals, bacterial and mildew growth.

5. Lining:

Rubber shall be single ply extrusion of EPDM polymer. Styrene butadiene rubber (SBR) which is not a natural resister, is not acceptable. Thermoplastic liners such as polyurethane are also not acceptable. The surface must be free from corrugations. The lining thickness shall be tightly controlled to reduce weight and kink radius.

6. Thickness:

.034 to .046 inches

7. Elongation:

500% minimum - The elongation between 10 and 800 psig shall not exceed 8%

8. Ozone Resistance:

Lining specimens shall be subjected to ASTM D 1149-91, "Standard Test Method for Rubber Deterioration – Surface Ozone Cracking in a Chamber" Specimens shall be prepared in accordance with ASTM D518-86 "Standard Test Method for Rubber Deterioration – Surface Cracking" Procedure C, and shall be elongated 15%. Ozone concentration shall be 100 +/- 5 parts per hundred million by volume. Temperature shall be 40.0° +/- 1.0°C. (104°F). Time shall be 100 hours. There shall be no appearance of cracking or crazing when viewed under a seven (7) power magnifying glass at any time during or at the end of the 100 hour exposure.

9. Accelerated Aging:

Lining specimens shall be subject to ASTM D573-88, "Standard Test Method for Rubber-Deterioration in an Air Oven". Specimens shall be exposed to 70° +/-1°C temperature for a duration of 166 +/-2 hours and shall be allowed to rest for 24 +/-1 hours before testing. The tensile strength and ultimate elongation of the rubber lining after aging shall not be less than 75 percent of the original tensile and elongation.

10. Adhesion:

Adhesive must be of uniform thickness around the circumference of the lining. Calendered adhesive with an overlap is not acceptable. Adhesion shall be such that the rate of separation of a 1 ½ inch strip of lining, transversely cut, shall not be greater than 1 inch per minute under a weight of 18 lbs. The thickness of the liner and adhesive shall not exceed .052 inches

11. Low Temperature Flexibility:

The hose shall be capable of performing in sub-zero conditions. A three foot section of hose shall be exposed to a temperature of -54° +/- 2°C (-65° +/-3°F) for a period of 24 hours. At the end of the exposure period, and while maintained at the -55°C exposure temperature, the hose shall be rapidly bent 180° double on itself, first one direction and then the other. There shall be no cracking or breaking of the jacket or liner. Leakage shall be a cause for rejection.

12. Hydrostatic Testing:

- a. Hydrostatic tests shall be conducted on hose equipped with the couplings to be delivered in accordance with NFPA 1961. Each length of hose shall be subjected to a hydrostatic proof test pressure of 800 psig for at least 15 seconds and not more than 1 minute.

- Higher test pressures which may weaken the hose are expressly forbidden.
- b. The hose shall not twist more than 1 ¾ turns per 50 feet under a pressure of 800 psig. No final twist in a direction to loosen the couplings shall be permitted.
 - c. The hose shall not warp more than 20 inches from a straight line drawn from center to center of the fittings at the ends of the hose, and the hose shall not rise from the table.
 - d. The expansion in circumference of the hose between 10 and 800 psig shall not exceed 8 percent.
 - e. The elongation between 10 and 800 psig shall not exceed 8 percent.

13. Burst Test:

A three foot sample of hose chosen at random shall stand without failure, a hydrostatic pressure of 1200 psig while lying straight or curved on a 27 inch radius. Retention of the coupling to the hose shall equal or exceed the burst pressure.

14. Kink Test:

A full length shall withstand, while kinked, without failure, a hydrostatic pressure of 600 psig.

15. Diameter:

The hose shall have an internal diameter of not less than the trade size of the hose, except that the internal diameter of the 2 ½ inch hose shall not be less than 2 9/16 inches.

16. Method of Testing:

All measurements and tests shall be made in accordance with ASTM D 380-87, "Standard Test Methods for Rubber Hose", except as otherwise specified herein. All tests shall be conducted at the point of manufacture, or at a laboratory equipped for such testing. All tests shall be performed as specified in NFPA 1961 (Current Edition). Hydrostatic tests shall be conducted under controlled conditions employing equipment capable of supplying a uniform pressure.

Hose	Proof Test Pressure (psig)	Service Test Pressure (psig)	Burst Test Pressure (psig)	Kink Test Pressure	Cplg Bowl Size (in.)	Weight 50 ft. Uncoupled (lbs.)	Coil Dia. Per 50 ft.	Flat Width (in.)
2 ½ inch	800	400	1200	600	3"	31	21	4 ¼"

Color: White

Shipping Lengths: 50 feet

Couplings: Standard Male & Female Couplings, 2 ½"

4. 1 ¾" Firequip 800 or City Approved Equal Premium Quality, Double Jacket, Municipal Fire Hose

7,200 Feet

- 1. Hose must meet all requirements of NFPA 1961, Standard on Fire Hose Edition (1992 Edition)
- 2. Jackets:
 - a. Even, firm and well woven
 - b. Free from unsightly defects, dirt, knots, lumps and irregularities of twist

- c. Seamless with polyester filler yarns woven around the hose throughout the length, with the wrap ends interwoven and covering the filler yarns
- d. Use of Nylon, Polyamide or Rayon yarns used in the warp or filler direction is not allowed. Use of any warp yarns of the filament or entangled construction is expressly forbidden.
- e. Filler yarns of inner and outer jackets shall be high-tenacity filament polyester developed, designed and processed for fire hose jacket filler yarns.
- f. Filler yarns shall be free from defects that are unsightly or may affect serviceability of the finished hose.
- g. The staple polyester warp ends must completely cover and protect the filament polyester filler yarns

3. Impregnation:

Each outside jacket shall be completely impregnated by a mechanical process to provide full coverage of an abrasion-resistant, water repellent, heat resistant compound prior to the jackets and inner liner being combined.

4. Wear Guard:

Hose to have an impregnated coating that resists heat and flame, eliminates water pickup, resists petrol-chemicals, bacterial and mildew growth.

5. Lining:

Rubber shall be single ply extrusion of EPDM polymer. Styrene butadiene rubber (SBR) which is not a natural resister, is not acceptable.

Thermoplastic liners such as polyurethane are also not acceptable. The surface must be free from corrugations. The lining thickness shall be tightly controlled to reduce weight and kink radius.

6. Thickness:

.034 to .046 inches

7. Elongation:

500% minimum - The elongation between 10 and 800 psig shall not exceed 8%

8. Ozone Resistance:

Lining specimens shall be subjected to ASTM D 1149-91, "Standard Test Method for Rubber Deterioration – Surface Ozone Cracking in a Chamber"

Specimens shall be prepared in accordance with ASTM D 518-86 "Standard Test Method for Rubber Deterioration – Surface Cracking"

Procedure C, and shall be elongated 15%. Ozone concentration shall be 100 +/- 5 parts per hundred million by volume.

Temperature shall be 40.0° +/- 1.0°C. (104°F). Time shall be 100 hours.

There shall be no appearance of cracking or crazing when viewed under a seven (7) power magnifying glass at any time during or at the end of the 100 hour exposure.

9. Accelerated Aging:

Lining specimens shall be subject to ASTM D 573-88, "Standard Test Method for Rubber-Deterioration in an Air Oven". Specimens shall be exposed to 70° +/-1°C temperature for a duration of 166 +/-2 hours and shall be allowed to rest for 24 +/-1 hours before testing. The tensile strength and ultimate elongation of the rubber lining after aging shall not be less than 75 percent of the original tensile and elongation.

10. Adhesion:

Adhesive must be of uniform thickness around the circumference of the lining. Calendered adhesive with an overlap is not acceptable. Adhesion shall be such that the rate of separation of a 1 ½ inch strip of lining, transversely cut, shall not be greater than 1 inch per minute under a weight of 18 lbs. The thickness of the liner and adhesive shall not exceed .052 inches

11. Low Temperature Flexibility:

The hose shall be capable of performing in sub-zero conditions. A three foot section of hose shall be exposed to a temperature of -54° +/- 2°C (-65° +/- 3°F) for a period of 24 hours. At the end of the exposure period, and while maintained at the -55°C exposure temperature, the hose shall be rapidly bent 180° double on itself, first one direction and then the other. There shall be no cracking or breaking of the jacket or liner. Leakage shall be a cause for rejection.

12. Hydrostatic Testing:

- a. Hydrostatic tests shall be conducted on hose equipped with the couplings to be delivered in accordance with NFPA 1961. Each length of hose shall be subjected to a hydrostatic proof test pressure of 800 psig for at least 15 seconds and not more than 1 minute. Higher test pressures which may weaken the hose are expressly forbidden.
- b. The hose shall not twist more than 4 ¼ turns per 50 feet under a pressure of 800 psig. No final twist in a direction to loosen the couplings shall be permitted.
- c. The hose shall not warp more than 20 inches from a straight line drawn from center to center of the fittings at the ends of the hose, and the hose shall not rise from the table.
- d. The expansion in circumference of the hose between 10 and 800 psig shall not exceed 8 percent.
- e. The elongation between 10 and 800 psig shall not exceed 8 percent.

13. Burst Test:

A three foot sample of hose chosen at random shall stand without failure, a hydrostatic pressure of 1200 psig while lying straight or curved on a 27 inch radius. Retention of the coupling to the hose shall equal or exceed the burst pressure.

14. Kink Test:

A full length shall withstand, while kinked, without failure, a hydrostatic pressure of 600 psig.

15. Diameter:

The hose shall have an internal diameter of not less than the trade size of the hose.

16. Method of Testing:

All measurements and tests shall be made in accordance with ASTM D 380-87, "Standard Test Methods for Rubber Hose", except as otherwise specified herein. All tests shall be conducted at the point of manufacture, or at a laboratory equipped for such testing. All tests shall be performed as specified in NFPA 1961 (1992 Edition). Hydrostatic tests shall be conducted under controlled conditions employing equipment capable of supplying a uniform pressure.

Hose	Proof Test Pressure (psig)	Service Test Pressure (psig)	Burst Test Pressure (psig)	Kink Test Pressure	Cplg Bowl Size (in.)	Weight 50 ft. Uncoupled (lbs.)	Coil Dia. Per 50 ft.	Flat Width (in.)
2 ½ inch	800	400	1200	600	2 1/8	16	18	3 - 1/16
Color: White Shipping Lengths: 50 feet Couplings: Standard Male & Female Couplings, 1 ½"								

End of Technical Specifications

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MBE/WBE Participation Plan for Goods and Services

RFP / ITB # 0007216
RFP / ITB Name Fire Hose, Fittings & Couplings for IFD
Vendor Name Municipal Emergency Services, Inc
Address 6975 Hillsdale Court
City/State/Zip Indianapolis, IN 46250
Phone (317) 596-1700
FAX (317) 596-1701
E-mail aulrich@mesfire.com

Please indicate whether this plan is for direct or indirect participation:

☐ Direct Participation Plan ☒ Indirect Participation Plan

The following minority/women owned firms will be participating directly in the RFP/ITB according to the following schedule. (Please note that an Application for MBE/WBE Program Waiver must be attached if no direct participation is available.)

<u>MBE/WBE</u>	<u>Phone</u>	<u>Email</u>	<u>Contact</u>	<u>Trade</u>	<u>Amount</u>
Meadows	(847)397-8888	-	Louie Liao	Office Supplies	\$18,000
Office Supply					

Please indicate which firms are MBE and which are WBE

**NOTE: YOU MUST INCLUDE EITHER A COMPLETED "MBE/WBE PARTICIPATION FORM"
AND/OR THE "APPLICATION FOR WAIVER" WITH YOUR SUBMISSION**

**Failure to provide the MBE/WBE Participation Plan or Application for Waiver at the time of
submission will result in the disqualification and rejection of the bid/proposal.**

NOTICE TO VENDORS

1. Will you extend your quoted prices of said contract to political subdivisions in Marion County (and notify Indianapolis Purchasing division upon initial extension to an additional subdivision)?

YES ✓

NO _____

2. Will you extend your quoted prices of said contract to political subdivisions in adjoining counties (and notify Indianapolis Purchasing division upon initial extension to an additional subdivision)?

YES ✓

NO _____

3. Will you extend your quoted prices of said contract to political subdivisions in Indiana (and notify Indianapolis Purchasing division upon initial extension to an additional subdivision)?

YES ✓

NO _____

4. Will you agree to provide, as requested by the City of Indianapolis Purchasing Department no more than quarterly, system-generated invoicing information for all political subdivision currently purchasing off of the Agreement as an audit step to ensure that price discounts are being realized by the City of Indianapolis?

YES ✓

NO _____

[Political subdivisions include cities, towns, school corporations, and county governments. If you mark YES you are agreeing that you are willing to extend your quoted price/proposed price to any of these entities if they wish to purchase off of any Agreement resulting from this quote.]

5. The City of Indianapolis DOES NOT accept responsibility for purchase orders issued by other political subdivisions.

6. All political subdivisions must be willing to accept quoted items(s) as described in the specifications without any changes, no matter how minute, once the quote is accepted by the City of Indianapolis.

Company Name: MES INC

Representative Printed Name: JAMES W. HARDIE

Representative Signature: [Signature]

Date: 3/26/09

Telephone: 317-596-1700

E-Mail: jhardie@mesfire

Political Subdivision Participation Discounts

The City of Indianapolis is interested in opportunities that benefit not only the City but surrounding contiguous counties. Respondents should be aware that the City of Indianapolis and other political subdivisions in Marion and adjoining counties have the ability within state statute to utilize other governmental units' contracts—thereby streamlining the sales cycle for vendors.

Acknowledging that the resulting agreement may be utilized by other political subdivisions, the respondents should offer percentage discounts to pricing for purchase quantity increases due to additional political subdivision participation.

Price tiers/discounts will apply for all participating subdivisions, including the City of Indianapolis, in aggregate. Aggregate discounts will apply to aggregated political subdivision purchases made within a year after an agreement is signed, or within the year thereafter, and will be offered in proportion to individual political subdivision participation in the form of a rebate off new purchases. **(Note: this could feasibly result in political subdivisions putting in a \$0.00 (or similar) year-end order for some "discount earned" hose lengths.)**

Achievement of target volumes shall be calculated on an annual basis and re-set to zero after the first year. (The first "annual" period will start on the date of execution.)

This form is optional. If the vendor does not wish to offer aggregate volume discounts, this form need not be completed.

OFFERED AGGREGATE ANNUAL VOLUME DISCOUNTS *N/A*

The vendor can offer discounts on larger aggregate annual volumes. The percentage specified in the price column will indicate the percentage of the "**Base Price**" purchasing entities will pay the vendor if the specified volume is reached. These percentages will be in addition to any Order Quantity Discounts.

Hose Type (5", 3" or 2 ½", as per specifications above)	Color (yellow, red, blue, white, any)	Base Price, at volume specified above (Price A)	Target Volume	Price as a percentage of base price (Price B)	Target Volume	Price as a percentage of base price (Price C)	Target Volume	Price as a percentage of base price (Price D)
Example: 5" <i>N/A</i>	High- vis Yel	\$10.00/ length	12,000 feet	95% [\$9.50/ length]	14,000 feet	93% [\$9.30/ length]	20,000	90% [\$9.00/ length]

Exception Sheet
Fire Hoses, Fittings and Couplings

Please list and explain any exceptions to the specifications and terms of the Invitation to Quote. Please note that the taking of an exception may cause your quote to be deemed "non-responsive" if it is determined to be a material variance.

NO EXCEPTIONS

Company Name: MES FIRE INC.

Representative Printed Name: JAMES W. HARDIE

Representative Signature: 

Date: 3-26-09

Telephone: 317-596-1700

E-Mail: JHardie@mesfire.com

FIREQUIP



SUPPLIERS OF QUALITY FIRE HOSE

FULL-LINE • FULL-SERVICE • FIRST CLASS

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www.firequip.com

Hydro Flow Supply Line



Attack Lite Poly Supply Line



Firequip DJ-800



Booster Hose



Forestry Hose



Rack and Reel



Suction Hose






Accessories





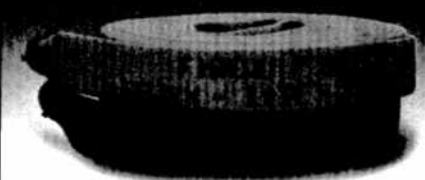
1-877-MES-FIRE
www.mesfire.com

MUNICIPAL FIRE HOSE


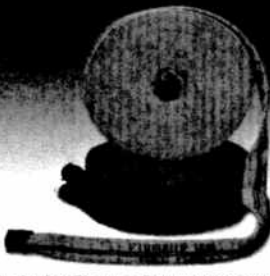

FIREQUIP 800						CLASSIC VICTORY						COMMANDER SUPREME																																																																								
																																																																																				
Double Jacket EPDM Rubber Lined Conventional Lightweight Fire Hose						Double Jacket EPDM Rubber Lined Oversized Waterway						Double Jacket EPDM Rubber Lined Heavy Duty Fire Hose																																																																								
Construction	• Inner and Outer Jackets - 100% High Tenacity Spun Polyester					• Inner and Outer Jackets - 100% High Tenacity Spun Polyester					• Inner and Outer Jackets - 100% High Tenacity Spun Polyester																																																																									
	• Lining - Extruded Synthetic EPDM Rubber					• Lining - Extruded Synthetic EPDM Rubber with 1.88" Waterway					• Lining - Extruded Synthetic EPDM Rubber with a .060" thick tube																																																																									
	• Protective Treated Coating: WearGuard					• Protective Treated Coating: WearGuard					• Protective Treated Coating: WearGuard																																																																									
	• NFPA 1901 Pump Panel Colors: Yellow, Red, Orange, Blue, Green, Tan, Black, White (untreated)					• NFPA 1901 Pump Panel Colors: White, Red, Yellow with Tracer Stripe					• NFPA 1901 Pump Panel Colors: Yellow, Red, Orange, Blue, Green, Tan, Black, White (untreated)																																																																									
Applications	• Municipal Attack Line and Supply Line					• Municipal Attack and Supply Hose					• Municipal Attack Line and Supply Line																																																																									
	• Relay Pumping/Rural Water Supply					• Relay Pumping/Rural Water Supply					• Relay Pumping/Rural Water Supply																																																																									
	• Industrial Fire Fighting					• Industrial Fire Fighting					• Industrial Fire Fighting																																																																									
	• Master Stream Appliances					• Master Stream Appliances					• Master Stream Appliances																																																																									
Performance Features	• Crash/Fire Rescue					• Crash/Fire Rescue					• Crash/Fire Rescue																																																																									
	Flow Characteristics: Very low friction loss, smooth bore					Flow Characteristics: Enlarged 1.88" Waterway delivers Highest Flows Available.					Flow Characteristics: .060" thick liner creates extremely smooth waterway																																																																									
	Exclusive Color Coding: Improved communications between pump operator and nozzle man. NFPA 1901 recommendations					Low Friction Loss					Very low friction loss																																																																									
	Tightly Woven Fabric: Flat folding abrasion and kink resistant					Extremely High Kink Resistance with Low Pressure Nozzles					Rated SUPREME for all-around measured performance																																																																									
Sizes and Pressure	Meets and exceeds all NFPA Standards, current edition					Stands in a Class of its Own, One of a Kind, Back to the Basics of Fire Hose					Meets and exceeds all NFPA Standards, current edition																																																																									
	Five-Year Warranty					Meets and exceeds all NFPA Standards, current edition					Supreme Kink Resistance																																																																									
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1-877-MES-FIRE

MUNICIPAL FIRE HOSE

ARMORED ULTRA COMBAT						ATTACK LITE POLY						ATTACK LITE NYLON																																																																	
<div></div> <p>Double Jacket Polyester Filament Yarn Extruded One-Piece Nitrile Rubber Liner</p>						<div></div> <p>Double Jacket Polyester Ultra Lightweight Thermo-Polyurethane Lined (TPU)</p>						<div></div> <p>Double Jacket Lightweight Nylon Thermo-Polyurethane (TPU) Liner</p>																																																																	
Construction						Construction						Construction																																																																	
<ul style="list-style-type: none">• Outer Jacket - 100% Polyester Filament Yarn• Inner Jacket/Liner - Synthetic Yarn with Nitrile Rubber Extruded-thru-the-Weave Resulting in a One-Piece Construction• One Inch Wide White Stripe with Border Tracer Lines Runs Length of Hose.• Pre-Dyed Yarns: Day-Glo Yellow, Red, Blue						<ul style="list-style-type: none">• Inner and Outer Jackets - 100% High Tenacity Spun Polyester• Lining - Thermo-Polyurethane (TPU) Liner Bond with Inner Woven Jacket• Protective Treated Coating - Impregnated by a mechanical process to provide a total saturation of a synthetic polymeric treatment, heat fused within and on the outside of the woven jacket. The coating provides superior abrasion, heat, flame, and chemical resistance plus reduces water absorption• NFPA 1901 Pump Panel Colors: Yellow, Red, Orange, Blue, Green, Tan, White (untreated)						<ul style="list-style-type: none">• Outer Jackets - 6.6 Nylon Entangled Filament Polyamide• Lining - Thermo-Polyurethane (TPU) Liner Bond with Inner Woven Jacket• Protective Treated Coating - Impregnated by a mechanical process to provide a total saturation of a synthetic polymeric treatment, heat fused within and on the outside of the woven jacket. The coating provides superior abrasion, heat, flame, and chemical resistance.• NFPA 1901 Pump Panel Colors - Yellow, Red, Orange, Blue, Green, Tan																																																																	
Applications						Applications						Applications																																																																	
<ul style="list-style-type: none">• High Rise Packs• Ideal for Internal Attack Line• Municipal Attack Line• Master Stream Appliances• Outstanding for CAFS operations• Confined Space Fire Fighting						<ul style="list-style-type: none">• Number One Preference for High Rise Packs• Industrial and Municipal Fire Fighting• Master Stream Appliances• Municipal Potable Water Transfer• Crash/Fire Rescue• All Cold Weather Applications. -55°F• Relay Pumping for Rural Water Supply						<ul style="list-style-type: none">• Strong Preference in High Rise Packs• Industrial and Municipal Fire Fighting• Master Stream Appliances• Dual Use, Attack & Supply Hose• Potable Water Transfer• Crash/Fire Rescue• All Cold Weather Applications. -55°F• Relay Pumping for Rural Water Supply																																																																	
Performance Features						Performance Features						Performance Features																																																																	
<p>Flow Characteristics: Oversized Waterway Delivers More Water, Very Low Friction Loss</p> <p>Virtually Kink Resistance, Unbeatable Anti-Kink Performance</p> <p>Higher Pressure Rating than Conventional Hose</p> <p>Lowest Drag Coefficient Available resulting in less abrasion</p> <p>Lightweight for reduced firefighter fatigue</p> <p>Incredible Puncture Resistance</p> <p>Highly Visible Day-Glo Colors</p> <p>Five-Year Warranty</p>						<p>Flow Characteristics: Low friction loss</p> <p>Lightweight/Space Saving: Requires Less Space than Standard Double Jacket or Rubber Hose</p> <p>Reduces Firefighter Fatigue in High Rise Conditions with Easier Handling</p> <p>Protective Color Impregnation: Immediate Line Identification and Communication Between Pump Operator and Nozzle Man</p> <p>Tightly Woven Fabric: With reduced thickness liner, hose folds flat and tight in hose bed. Tight weave enhances abrasion resistance, fights kinking</p> <p>Meets and exceeds all NFPA requirements for Fire Hose, current edition</p> <p>One-Year Warranty</p>						<p>Flow Characteristics: Low friction loss</p> <p>Lightweight/Space Saving: Requires Less Space than Standard Double Jacket or Rubber Hose</p> <p>Reduces Firefighter Fatigue in High Rise Conditions with Easier Handling</p> <p>Protective Color Impregnation: Immediate Line Identification and Communication Between Pump Operator and Nozzle Man</p> <p>Tightly Woven Fabric: With reduced thickness liner, hose folds flat and tight in hose bed. Tight weave enhances abrasion resistance, fights kinking</p> <p>Lower Drag Resistance Coefficient</p> <p>Meets and exceeds all NFPA requirements for Fire Hose, current edition</p> <p>One-Year Warranty</p>																																																																	
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MUNICIPAL FIRE HOSE

	DJ 800 NYLON RUBBER LINED	FULL FLOW	MASTER FLOW																																																																																
																																																																																			
	Double Jacket Nylon EPDM Rubber Lined Lightweight Fire Hose	Double Jacket Thermo-Polyurethane (TPU) Lined Ultra Lightweight / Higher GPM	Double Jacket One-Piece Nitrile Rubber Liner Lightweight - Higher GPM - Kink Resistant																																																																																
Construction	<ul style="list-style-type: none">• Outer Jacket - 6.6 Nylon entangled filament polyamide• Lining - Extruded Synthetic EPDM Rubber• Protective Treated Coating: Impregnated by a mechanical process to provide a total saturation of a synthetic polymeric treatment, heat fused within and on the outside of the woven jacket. The coating provides superior abrasion, heat, flame, and chemical resistance.• NFPA 1901 Pump Panel Colors - Yellow, Red, Orange, Blue, Green, Tan	<ul style="list-style-type: none">• Outer Jacket - 100% High Tenacity Polyester• Lining - Specially developed polyurethane bonded weave process. Both warp and filler yarns are permanently bonded with urethane to form a unitized liner.NO ADHESIVES USED• Protective Treatment Coating: WearGuard• NFPA 1901 Pump Panel Colors: Yellow, Red, Orange, Blue, Lime Green, White	<ul style="list-style-type: none">• Outer Jacket - 100% High Tenacity Synthetic Yarn• Lining - Specially developed nitrile rubber extruded-thru-the-weave one piece liner.• NO ADHESIVE USED: Unitized Inner Liner• Protective Treated Coating: WearGuard• NFPA 1901 Pump Panel Colors: Yellow, Red, Orange, Blue, Green, Tan																																																																																
Applications	<ul style="list-style-type: none">• Industrial and Municipal Fire Fighting• Master Stream Appliances• Attack & Supply• Crash/Fire Rescue• Relay Pumping / Rural Water Supply	<ul style="list-style-type: none">• High Rise Packs• Master Stream Appliances• Municipal Attack and Supply• Relay Pumping• Crash/Fire Rescue• Industrial Fire Fighting• Potable Water Transfer• All Cold Weather Applications. -55°F	<ul style="list-style-type: none">• High Rise• Master Stream Appliances• Municipal Attack and Supply Hose• Relay Pumping• Crash/Fire Rescue• Ideal for CAFS operations																																																																																
Performance Features	<p>Lightweight/Space Saving: Lighter and more compact than most double jacket rubber lined fire hose</p> <p>Flow Characteristics: Low friction loss</p> <p>Exclusive Color Coding: Immediate identification and communications of hose lines between pump operator and nozzle man</p> <p>Tightly Woven Fabric: Flat folding, abrasion and kink resistant, less drag resistant</p> <p>Meets and exceeds all NFPA requirements for Fire Hose, current edition</p> <p>Five-Year Warranty</p>	<p>Lightweight/Space Saving: Requires less space, lighter weight than standard double jacket hose, easier to handle</p> <p>Flow Characteristics: Extremely low friction loss. High flow.</p> <p>Kink Resistant: Self-straightening when charged. Can be backed out through a 34" doorway without kinking</p> <p>Color Coding: Immediate identification and communication of hose lines between pump operator and nozzle man</p> <p>No Delamination: Lining material is permanently bonded to warp and filler yarns. No Adhesives Used</p> <p>One-Year Warranty</p>	<p>Flow Characteristics: Low friction loss, high flow rates</p> <p>Kink Resistant : Great anti-kink performance. Passes 34", 24" and 18" doorway kink test</p> <p>Drag Resistance: Much less drag resistance than conventional hose.</p> <p>Superb Abrasion Resistance: Virtually no signs of wear when subjected to standard FM abrasion test.</p> <p>Outstanding Heat Resistance: Six times more heat resistant than conventional hose</p> <p>No Delamination of liner</p> <p>Meets NFPA Standards 1961, current edition</p> <p>Five-Year Warranty</p>																																																																																
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1-877-MES-FIRE

INDUSTRIAL HOSE

FORESTRY HOSE




	SINGLE JACKET	RACK AND REEL	WILDLAND ULTRA FORESTRY																																																							
																																																										
	Single Jacket Industrial Hose EPDM Rubber Lined	Single Jacket Thermo-Polyurethane Liner Pin Rack Folded	Single Jacket Thermo-Polyurethane Lined																																																							
Construction	<ul style="list-style-type: none">• Outer Jackets - 100% High Tenacity Polyester, Single Jacket• Liner - Extruded Synthetic EPDM Rubber• Protective Treated Coating - WearGuard• Colors - White• Non-Stocking Colors Made to Order - Yellow, Red, Orange, Blue, Green, Tan	<ul style="list-style-type: none">• Outer Jackets - Single Jacket High Tenacity Polyester Filament Yarn• Liner - Thermo-Polyurethane (TPU) bonded to fabric jacket• Colors - White• Folded to fit pin racks• Brass couplings standard	<ul style="list-style-type: none">• Outer Jackets - 100% Polyester Yarn with Filament Polyester Filler Yarns• Liner - Extruded thermo-polyurethane, compounded to resist ozone• Protective Treatment Coating - WearGuard• Colors - Yellow• Specification 187, meets USDA FSS 5100-187 Type 1																																																							
Applications	<ul style="list-style-type: none">• Utilities• Mill Discharge• Underground Mine Fire Fighting (MSHA)• Shipboard• Wash Down and Maintenance• In-Plant Fire Protection• General Industrial, Construction Use	<ul style="list-style-type: none">• Occupant Use Hose• Standpipe Hose• Indoor Fire Protection• Hotels, Schools, Commercial, Industrial	<ul style="list-style-type: none">• Brush, Grass and Forestry Fires• Designed for use with portable pumps, heavy duty pumps and tank trucks• Wildland Applications																																																							
Performance Features	<p>Premium Quality, long wearing hose</p> <p>Tightly woven spun polyester yarns for superior abrasion resistance</p> <p>Longer service life</p> <p>Mildew, chemical and scuff resistant</p> <p>FM Approved</p> <p>One-Year Warranty</p>	<p>All synthetic standpipe hose</p> <p>Replaces linen hose</p> <p>Extremely light, flexible and compact (folded)</p> <p>Maintenance free - mildew resistant</p> <p>One-Year Warranty</p>	<p>Premium Quality, long lasting hose</p> <p>Mildew Resistant - No drying required</p> <p>Lightweight - Designed to be carried by back pack or by hand for long distances over steep or rough terrain and forest conditions</p> <p>Color Impregnation for greater abrasion resistance, heat resistance, reduced water absorption</p> <p>Non-weeping (weeping hose available upon request)</p> <p>One-Year Warranty</p>																																																							
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BOOSTER HOSE

	FIRE ENGINE BOOSTER	REEL - LITE	HI - PRESSURE																																
																																			
	Rayon Braid Reinforced Neoprene Red Reel Booster Hose	Reel Lite Booster Lightweight Woven TPU Forestry Reel Hose	High Pressure Booster Steel Braid Reinforced 3000 psi Booster Hose																																
Construction	<ul style="list-style-type: none">• Outer Cover - Specially compounded red neoprene tough cover• Inner Tube - Smooth Black Synthetic SBR Rubber• Flexible Strength - Reinforced with two braids of high tensile rayon yarn <p>NOTE: The 3/4" Diameter Hose-Coupled with 1" threaded couplings</p>	<ul style="list-style-type: none">• Single Jacket - 100% High Tenacity Polyester Cover• Circular Woven with Helical Inner Reinforcement• Polyurethane Liner• Expansion Ring Couplings or Field Repairable Couplings• Protective Treated Cover - Wear Guard, Yellow or Red	<ul style="list-style-type: none">• Outer Jacket - Tough durable black rubber cover resistant to oil, weather and abrasion• Liner - Smooth inner tube reinforced with two braids of steel wire• Couplings - Hydraulic style crimped coated steel couplings• Adaptors - Easily adapted for NST or NPSH threads																																
Applications	<ul style="list-style-type: none">• Attack Line Hose for Multiple Purposes• Initial Frontline Attack• Structure Fire Fighting• Vehicle Fires• Grass, Wildland and Forestry Fires• Industrial Fire Fighting	<ul style="list-style-type: none">• First Arrival Frontline Attack Line• Grass and Brush Fires• Wildland Fires• Dumpster Fires• Industrial Use	<ul style="list-style-type: none">• Attack Line Hose for Multiple Purposes• Initial Frontline Attack• Structure Fire Fighting• Vehicle Fires• Grass, Wildland and Forestry Fires• Industrial Fire Fighting• Replacement Hose for John Beam High Pressure Pumps																																
Performance Features	<p>Smooth inner tube for low friction loss</p> <p>First Attack Fully Loaded, Ready on Reel</p> <p>Tough and Durable - Special neoprene compound provides a tough yet flexible cover that resists abrasion, gouging, ultra-violet and ozone aging and most chemicals</p> <p>Flexible Ease of Handling - Smooth outer cover lowers drag resistance</p> <p>Safety Factor - 4:1 safety factor ensures safety and reliability (1" & 3/4")</p> <p>Meets and exceeds NFPA Standards 1961, current edition</p> <p>Five-Year Warranty</p>	<p>Lightweight</p> <p>Flexible with Helix Reinforcement</p> <p>Low Drag Resistance Coefficient</p> <p>Full Loaded, Ready on Reel</p> <p>TPU Liner has Low Kink Resistance</p> <p>One-Year Warranty</p>	<p>First Attack, Fully Loaded on Reel</p> <p>Black outer jacket easily maintained</p> <p>Smooth inner tube for low friction loss</p> <p>Wire reinforcement maintains rigidity under pressure yet remains flexible</p> <p>Increased safety factor for high pressure pumps</p> <p>Meets and exceeds NFPA Standards 1961, current edition</p> <p>Five-Year Warranty</p>																																
Sizes and Pressure	<table><tr><th>Size</th><th>Bowl Size</th><th>Working Pressure</th><th>Burst psi</th></tr><tr><td>3/4"</td><td>1-1/4"</td><td>800</td><td>3200</td></tr><tr><td>1"</td><td>1-1/2"</td><td>800</td><td>3200</td></tr><tr><td>1-1/2"</td><td>2"</td><td>200</td><td>600</td></tr></table> <p>Note: 1.5" has a 3:1 Safety Factor</p>	Size	Bowl Size	Working Pressure	Burst psi	3/4"	1-1/4"	800	3200	1"	1-1/2"	800	3200	1-1/2"	2"	200	600	<table><tr><th>Size</th><th>Bowl Size</th><th>Proof psi</th><th>Service psi</th><th>Burst psi</th></tr><tr><td>1"</td><td>1-3/16"</td><td>600</td><td>300</td><td>900</td></tr></table>	Size	Bowl Size	Proof psi	Service psi	Burst psi	1"	1-3/16"	600	300	900	<table><tr><th>Size</th><th>Working Pressure psi</th><th>Burst psi</th></tr><tr><td>3/4"</td><td>3000</td><td>12,000</td></tr></table>	Size	Working Pressure psi	Burst psi	3/4"	3000	12,000
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1-877-MES-FIRE

HARD SUCTION HOSE

	TANK - FLEX	CORRUGATED	MAXI - FLEX PVC																																																																				
																																																																							
	Conventional Hard Rubber Wire Reinforced Suction Hose	Conventional Hard Rubber Wire Reinforced Suction Hose	Ultra Light - Ultra Flexible For Drafting Only																																																																				
Construction	<ul style="list-style-type: none">Outer Jackets - Cover and tube synthetic EPDM rubberLiner - Special wire helix and nylon fabric reinforcementConstructed with soft cuff ends for greater coupling retentionSmooth Cover and Inner Lining	<ul style="list-style-type: none">Outer Jackets - Cover and tube synthetic EPDM rubberCorrugated - "Spiraling Effect" of helix for greater flexibilityConstructed with soft cuff ends for greater coupling retentionRibbed Cover Enhances Flexibility	<ul style="list-style-type: none">THE ORIGINAL PVC LIGHTWEIGHT SUCTION ONLY HOSEIntroduced by Firequip in 1988Special corrugated PVC exterior for maximum flexibility and smooth waterwayClear flexible PVC between the helix ribs for full vision of waterDistinctive burgundy colored helix ribs for maximum UV protectionOne-piece extruded aluminum field repairable, reattachable collars on couplingsCollars are aluminum, NOT PLASTIC which is subject to temperature extremes																																																																				
Applications	<ul style="list-style-type: none">Drafting from any rural water sourceDesigned specifically for rural fire departments ease of handlingMunicipal Water Supply Transfer	<ul style="list-style-type: none">Drafting from any rural water sourceDesigned specifically for rural fire departments ease of handlingMunicipal Water Supply Transfer	<ul style="list-style-type: none">Drafting from any rural or municipal non-pressurized water sourceDesigned for SUCTION ONLY!PVC hose shall not be used on pressurized hydrants or for relay pumping, this is not a supply hose for hydrant use.Limited exposure to direct sunlight for long periods of time																																																																				
Performance Features	<p>More flexible than most standard hard suction hose for easier and faster hookup</p> <p>Tough, durable that can withstand pressure if required</p> <p>Designed for full vacuum</p> <p>Ozone Resistant</p> <p>Meets NFPA Standards 1961, current edition</p> <p>Five-Year Warranty</p>	<p>More flexible than most standard hard suction hose for easier, faster hookup</p> <p>Tough, durable that can withstand pressure if required</p> <p>Designed for full vacuum</p> <p>Ozone Resistant</p> <p>Meets NFPA Standards 1961, current edition</p> <p>Five-Year Warranty</p>	<p>Ultra flexible and lightweight, one-man hook-up operation if necessary</p> <p>Designed for full vacuum</p> <p>Couplings - NO PLASTIC PARTS</p> <p>Clear Couplings for full vision of water flow</p> <p>Time saving with less manpower required compared to conventional suction hose</p> <p>4", 4.5", 5", 6" coupled with reattachable bolt-on couplings</p> <p>Meets or Exceeds NFPA Standards 1961, current edition</p> <p>Two-Year Warranty</p>																																																																				
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FIREQUIPTM



Mailing Address

P.O. Box 2598 • Burlington, NC 27216-2598

Shipping Address

127 N. Broad Street • Burlington, NC 27217

TOLL FREE: 800-334-6823

TELEPHONE: 336-227-0123

FAX: 336-227-5015

WEBSITE: www.firequip.com

E-MAIL: fqi@firequip.com



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